

Study of the Circulation of Heat Transfer Fluid in the Permanent Magnets Thermo-Generator

Octavian Mangos

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Abstract

The variation of the heat transfer fluid temperature in the permanent magnet thermogenerator was studied. SOLIDWORKS Flow Simulation software is used for the simulations and the dependence of the liquid temperature in the discharge line of the thermogenerator has been determined as a function of the flow at an imposed temperature of the internal and external sleeves of the thermogenerator of 60° C. Based on the simulation results, the characteristics for various construction models were analyzed in order to streamline the conversion of wind energy into heat.

Keywords: *liquids, generators, permanent magnets, magnets, thermogenerators, simulation, heat transfer*

References

1. *Generator termic eolian cu curenți turbionari. Autori: MANGOS Octavian CIUPERCĂ Rodion SOBOR Ion.*
[Google Scholar](#)
2. Octavian MANGOS, "Evaluarea consumului de energie în gospodării pentru încălzirea apei calde menajere. Conferința tehnico - științifică a studenților masteranzilor și doctoranzilor 23 – 25 martie 2021/ Universitatea Tehnică a Moldovei - Chișinău: Tehnica-UTM", pp. 146-149, 2021, [online] Available: <https://utm.md/wp-content/uploads/2021/06/Culegere-Vol-I-Conf-tinerilor-UTM-2021.pdf>, ISBN 978-9975-45-700-2.
[Google Scholar](#)
3. *What You Can Do in SOLIDWORKS Flow Simulation*, [online] Available: https://help.solidworks.com/2020/english/SolidWorks/flopress/r_what_do_flow_simulation.htm.
[Google Scholar](#)
4. SOBOR Ion, CHICIUC Andrei, CIUPERCĂ Rodion and RACHIER Vasile, "Conversion of the wind energy into heat", *Proceedings of the 9th International Conference on Electromechanical and Power Systems SIELMEN 2013 October 2013*.
[Google Scholar](#)
5. SOBOR Ion, RACHIER Vasile, CHICIUC Andrei and CIUPERCĂ Rodion, "Small wind energy system with permanent magnet eddy current heater", *Bulletin of the polytechnic institute of Iasi*, 2013, [online] Available: http://www.bulipi-eee.tuiasi.ro/archive/2013/fasc.4/p12_f4_2013.pdf.
[Google Scholar](#)